DEPARTMENT OF THE ARMY
UNITED STATES ARMY ALASKA

ENVIRONMENTAL ASSESSMENT

CONSTRUCTION OF AN AMMUNITION SUPPLY POINT, FORT WAINWRIGHT, ALASKA

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SUMMARY

U.S. Army Alaska (USARAK) proposes construction of an Ammunition Supply Point (ASP, project number 56922) during 2003 in the cantonment area of Fort Wainwright, Alaska. The proposed project will provide storage, staging, loading and weighing facilities to process military munitions in preparation for strategic air deployment of the 172nd Brigade within a 96-hour deployment timeline.

Three alternatives have been analyzed in this environmental assessment (EA) for the construction of the ASP. Alternative A – 'No Action' proposes no construction activities, leaving a deficiency of adequate munitions supply point, staging, loading, and weighing facilities. Alternative B – 'New Construction, Option 1' proposes construction of a new ASP southeast of the current small arms ammunition storage complex extending south to Old Badger Road and east to Montgomery Road. Alternative C – 'New Construction, Option 2' proposes construction of a new ASP centered south of the current small arms ammunition storage complex extending south to Old Badger Road.

Issues: The proposed ASP alternative site locations lie outside of the non-attainment zone for carbon monoxide, and do not require a Record of Non-Applicability (RONA). However, a comprehensive RONA for vehicle emissions relating to USARAK projects at Fort Wainwright has been completed as part of the Alert Holding Area and Pallet Processing Facility EA, and is available for reference (USARAK 2002). The U.S. Army Corps of Engineers Regulatory Office has concluded that a wetlands permit is required for this project for Alternatives B & C (Appendix A). Threatened and endangered species do not use either of the alternative project site location areas and will not be impacted (Appendix B). Noise levels at the facilities would be compatible with existing land uses. Construction and use of the facilities will slightly increase the post's energy demands, air emissions, and traffic levels. Consultation with the State Historic Preservation Officer to determine whether there would be adverse effects on historic properties from the alternative site locations must occur prior to construction commencement (Appendix C).

Mitigation: To mitigate potential adverse impacts, the contractor will be required to prepare a storm water pollution prevention plan and implement best management practices to stabilize exposed soils and manage storm water runoff. Stabilization and re-vegetation measures will be coordinated with the USARAK Directorate of Public Works (DPW). If contamination is encountered, appropriate measures will be taken to remediate the site. A wetlands permit is required before construction commencement.

Given the noted mitigation measures, a Finding of No Significant Impact (FNSI) was recommended for all three alternatives. The EA supports the conclusion that the project would not constitute a major federal action significantly affecting the quality of the

human environment. The preferred alternative is Alternative C – 'New Construction Option 2'.

I. PURPOSE AND NEED FOR THE PROPOSED ACTION

A. Purpose and Need

USARAK proposes construction of an Ammunition Supply Point in the cantonment area of Fort Wainwright, Alaska. The proposed project will provide storage, staging, loading and weighing facilities to process military munitions in preparation for strategic air deployment of the 172nd Brigade within a 96-hour deployment timeline.

The proposed ASP is considered necessary to support the mission requirements of USARAK at Fort Wainwright in Alaska (Figures 1, 2). The planning and design of the ASP will be funded from a military construction budget with a construction start date in FY03.

USARAK is currently in draft stage in preparing an environmental impact statement (EIS) to assess the effects of the force transformation of the 172nd Infantry Brigade into a Stryker Brigade Combat Team (SBCT). A notice of intent to prepare an EIS was published in the Federal Register on March 4, 2002 (Vol. 67, No. 42, pp. 1916-1917).

The need for the ASP is independent of the force transformation of the 172nd Infantry Brigade. The proposed ASP is considered a separate and complete project. Fort Wainwright will experience no increase in troop strengths as a result of this proposed action.

The primary purpose of the EA is to serve as a means to ensure that the policies and goals defined in the National Environmental Policy Act (NEPA) are infused into the ongoing programs and actions of the Federal Government in accordance with 40 Code of Federal Regulations (CFR ξ 1502.1). Specific guidelines for preparation of this EA are found in Army Regulation 32 CFR Part 651, *Environmental Analysis of Army Actions* (Department of the Army, 2002).

B. Objectives

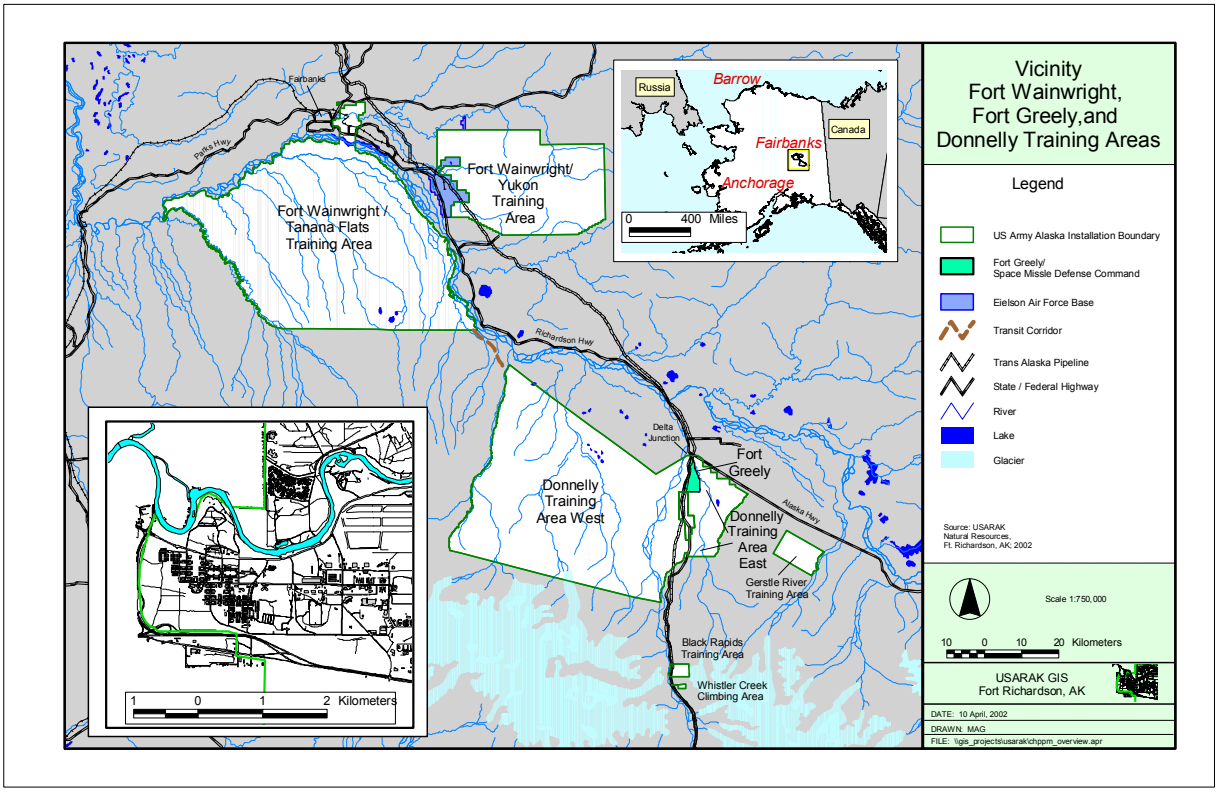
Objectives for the proposed action include the following:

a) Provide munitions storage, staging, loading and weighing facilities to meet the USARAK military mission.
b) Allow preparation for strategic air deployment of the 172nd Brigade within a 96-hour deployment timeline.
c) Build to anticipate future requirements for the USARAK mission.

C. Decisions to be made

USARAK will select an alternative for the ASP based on the content of this EA. This will include either the alternative not to build, or building on an appropriate site location at Fort Wainwright (Figure 1). This will meet the objectives of the proposed project and simultaneously satisfy Council on Environmental Quality (CEQ) regulations for NEPA documents as defined in 40 CFR ξ 1500.1.

Figure 1- Location of Fort Wainwright, Alaska and the Cantonment Area.



II. PROPOSED ACTIONS AND ALTERNATIVES

The ASP would consist of a scale house with administration area and latrine (7,498 s.f.), ammunition upload facility (9,699 s.f.), two ammunition storage igloos (3,840 s.f.), and exterior vehicle staging areas and lighting to allow 24-hour operations.

The project includes fire protection and information systems. Supporting facilities include utilities; electric service; lightning protection; paving, walks, curbs and gutters; parking and access roads; storm drainage; information systems; and site improvements. Heating and ventilation will be provided. Anti-terrorism/force protection measures include perimeter security and building standoff landscaping.

A. Reasonable Alternatives/Relevant Issues

1. Alternative A – 'No Action' Alternative

This alternative implies that USARAK will not be able to meet the 96-hour deployment requirement.

2. Alternative B – 'New Construction Option 1'

This alternative proposes construction of a new ASP southeast of the current small arms ammunition storage complex extending south to Old Badger Road and east to Montgomery Road (Figure 2).

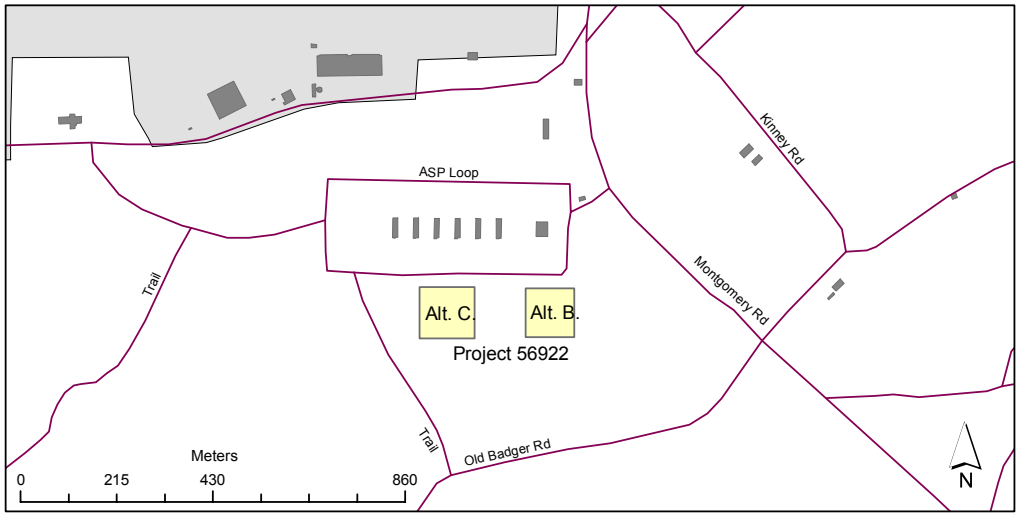
3. Alternative C – 'New Construction Option 2'

This alternative proposes construction of a new ASP centered south of the current small arms ammunition storage complex extending south to Old Badger Road (Figure 2).

Although alternative site locations B & C are closely situated, there are several factors that limit the placement of a new ASP in the cantonment area to these sites.

- The new ASP must be located in close proximity to the airfield to meet the 96-hour deployment requirement.
- The explosives stored in the ASP must meet quantity-distance standards for inhabited buildings and public traffic routes. This topic is further discussed in the Human Health/Safety section of this EA.
- The new ASP should be located near the current small arms ammunition storage complex to tie in with the existing infrastructure of that area.

Figure 2 – Proposed locations of Alternatives B & C – Ammunition Supply Point, Fort Wainwright, Alaska



A summary of environmental consequences to these alternatives is shown in Table 1. Table 1 is a comparison between alternatives and their affects on each resource. Resources given a 'none' status have little to no environmental consequences and will not be further discussed. All other categories (minor, moderate, severe and beneficial) will be further discussed in the 'Description of affected environment and environmental impacts' section.

Table 1 Summary of Environmental Consequences for the Proposed Alternatives and Identification of Relevant Issues

Resource	ASP		
	Alt. A	Alt. B	Alt. C
Air Quality	None	Minor	Minor
Noise	None	None	None
Water Quality/Wetlands	None	Moderate	Moderate
Geology	None	None	None
Climate	None	None	None
Floodplain	None	Minor	Minor
Infrastructure	None	None	None
Fisheries	None	Minor	Minor
Vegetation	None	Severe	Severe
Wildlife/Endangered Species	None	Minor	Minor
Cultural Resources	None	Minor	Minor
Public Access/Recreation	None	Moderate	Moderate
Aesthetics	None	None	None
Subsistence	None	None	None
Fire Management	None	None	None
Socioeconomic	None	Beneficial	Beneficial
Homeless Assistance	None	None	None
Environmental Justice	None	Beneficial	Beneficial
Human Health/Safety	None	Minor	Minor

Potential issues were determined to be relevant if they fell within the scope of the proposed action; if they suggested different actions or mitigation; if outside agency correspondence was required; or if they influenced the decision on the proposed action.

B. Alternatives Considered and Rejected

The three alternatives described above represent a reasonable range of alternatives. Additional alternatives were initially considered and eliminated based upon cost and logistical concerns.

A cost estimate and economic analysis was done comparing the below alternatives. This can be found in the document requesting construction (Form 1391) available in the strategic planning administrative file, Fort Wainwright, Alaska.

1. Renovation, Expansion or Conversion of Similar Existing On-Post Facilities

To meet the USARAK requirements, the renovation, expansion or conversion of similar existing on-post ammunition supply facilities were evaluated. It was determined that it is not feasible to renovate or expand the only existing facility, known as the Birch Hill Ammunition Complex. The location of this facility would require addition of approximately five miles of paved roadway between the existing bunker location and the existing paved road network. Additionally, the location of the Birch Hill Ammunition Complex would not meet the 96-hour munitions deployment requirement.

2. Lease of Available Off-Post Facilities

There are no facilities off post to meet the requirements of the USARAK deployment mission. Also, the appropriate site for a munitions deployment facility would have to be in proximity to the strategic route required for efficient transport of supplies. This option was eliminated from further consideration.

3. Use of Existing Facilities at Nearby DOD Installations

The option to utilize existing facilities at nearby DOD installations was eliminated from further consideration. There are no installations within a reasonable commuting distance from Fort Wainwright with munitions supply facilities. Eielson Air Force Base is the DoD installation nearest to Fort Wainwright, and is too far away.

III. DESCRIPTION OF THE AFFECTED ENVIRONMENT AND ENVIRONMENTAL IMPACTS (DIRECT AND INDIRECT) FROM THE PROPOSED ACTION AND ALTERNATIVES

A. Environmental Baseline Study (EBS)

An EBS was conducted by the Fort Wainwright Directorate of Public Works, Environmental Resources Department for alternative site locations B & C to identify potential concerns for inclusion in this EA. Items investigated and results include the following:

1. Any property or structure that was known to store, release, or otherwise dispose of hazardous substances was researched using an environmental computer program called REMOTEC. None were found with respect to the proposed site locations, although as discussed below, the installation as a whole is listed as a National Priorities List site under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or the Superfund).

2. Fort Wainwright Environmental Resources Department records, including all applicable documents associated with the Installation Restoration Program (IRP) were reviewed. The proposed site for Alternative C is located adjacent to a previously contaminated but cleaned area that contained fire training pits.

3. Historical aerial photographs of the project site produced in 1949 and 1967 were reviewed for potential environmental issues. No such issues were identified. Copies of

the most recent aerial photographs (and standard photo documentation of areas of concern) are located at the USARAK Environmental Resources Department office at Fort Wainwright, Alaska.

4. A site inspection was conducted looking for any visible features indicating potential contamination or cultural/natural resources significance. No such features were found.

5. Any permits, permit discontinuances or closure requirements that apply to the sites were investigated. A wetland permit would be required for construction at alternative site locations B & C.

6. Other sources of information, such as interviews and historic records were gathered. Valuable information from project managers, USACE/DPW engineers, and contractors was obtained.

B. Superfund (CERCLA) status of Fort Wainwright

All of Fort Wainwright, including proposed action sites, was listed on the Environmental Protection Agency (EPA) National Priorities List on August 30, 1990 under the auspices of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), also known as *Superfund* (et seq.). In the spring of 1992, the Army, EPA, and Alaska Department of Environmental Conservation (ADEC) signed a Federal Facility Agreement (FFA), which requires a thorough investigation of suspected historical hazardous waste source areas and appropriate remediation actions taken to protect public health. Fort Wainwright is currently in the process of clean-up activities under an Installation Restoration Plan (IRP). Any discovery of hazardous material contamination as outlined in the FFA would require appropriate regulatory coordination and compliance. For more information concerning the *Superfund* status of Fort Wainwright see the *Administrative Record* (DPW Environmental Resources Department 1994).

C. Physical Factors:

A more detailed description of the environmental setting for this and adjacent military land comprising Fort Wainwright may be found in the *Alaska Army Lands Withdrawal Renewal Final EIS* (USARAK 1998). Specific site characteristics are listed below.

1. Air Quality:

Fort Wainwright is classified as a Prevention of Significant Deterioration (PSD) major facility as defined in the following regulatory citations:

(1) 18 AAC 50.300(c)(1) due to the potential to emit of more than 250 tons per year (tpy) of a regulated air contaminant in an area classified as attainment or unclassifiable;

(2) 18 AAC 50.300(c)(2)(A) due to the potential to emit more than 100 tpy of a regulated air contaminant in an area designated attainment or unclassifiable and is a fossil-fuel-fired steam electric plant of more than 250 MMBtu/hr; and

(3) 18 AAC 50.300(c)(2)(V) due to the potential to emit more than 100 tpy of a regulated air contaminant in an area designated attainment or unclassifiable and is a fossil-fuel-fired boiler or combination of boilers totaling more than 250 MMBtu/hr.

A portion of Fort Wainwright is classified as a non-attainment area major facility as defined in 18 AAC 50.300(d) because it has the potential to emit more than 100 tons per year of a regulated air pollutant, carbon monoxide (CO), and is identified as a non attainment area under 18 AAC 50.015(1)(b).

The General Conformity Rule (40 CFR 93, Subpart B) applies to Fort Wainwright because it is located in a CO non-attainment area. Any Federal action within a non-attainment area or maintenance area must not hinder attainment of the National Ambient Air Quality Standards (NAAQS) or impede local efforts to control air pollution. The intent of this regulation is to demonstrate that Federal actions "conform with" the State Implementation Plan (SIP) for the geographical area. As part of the air quality impact analysis for these construction projects, Fort Wainwright must evaluate each action to ensure compliance with the regulatory provisions of the General Conformity Rule if the proposed action occurs within the non-attainment area.

If impacts are identified, mitigation measures must be identified and included in the conformity documentation for the project. Based on the information reviewed for this project, there will be no new combustion units added to the Fort Wainwright inventory as a result of the ASP. The ASP project is located outside of the CO non-attainment area of the Northern Alaska Intrastate Air Quality Control Region within Region 10 of the Environmental Protection Agency. Since the proposed location of the ASP is outside of the CO non-attainment area, the General Conformity Rule as described in 40 CFR Part 93 Subpart B does not apply.

Arctic haze is another factor that impacts the ambient air quality in the Fairbanks region. Industrial pollutants from Europe and Asia are transported across the Arctic Ocean and produce an effect known as arctic haze. During an arctic haze episode, sulfate pollutants in the ambient air may be boosted by as much as 0.68 micrograms per cubic meter (Rahn 1982). During these episodes, the ambient air concentration of vanadium, a byproduct of fossil fuel combustion, may average up to 20 times the normal background level and may also be found in the snow pack (AKDOT 1992). Recent analysis of the Canadian Arctic snow pack chemistry also indicates the long-range transfer of small concentrations of organochlorine pesticides (Gregor and Gummer, 1989). It can be expected that this arctic haze condition is a minor contributor to the overall contamination of the ambient air in the Fairbanks region.

Currently, Fort Wainwright must comply with permit conditions outlined in the state issued Air Quality Control Permit to Operate #9331-AA003, the Title V Operating

Permit Application, and the Air Quality Construction Permit #0031-AC059. These documents were consolidated into a revised Title V Operating Permit Application and submitted to the ADEC in October 2001. ADEC issued a draft Title V Operating Permit for Fort Wainwright in January 2003; the document is currently available for public review and the installation has not yet been issued a final permit. The Title V Operating Permit Program, identified in the 1990 Clean Air Act Amendments (CAAA), requires source owners with air pollutant emissions exceeding major source thresholds to obtain a Title V Operating Permit. The Title V major source thresholds for all criteria air pollutants (CAPs) are 100 tpy. The major source threshold for an individual hazardous air pollutant (HAP) is 10 tpy; or a combined threshold for multiple HAPs of 25 tpy. Under these regulations, Fort Wainwright is designated a major source for CAPs and HAPs and must comply with these requirements.

National Ambient Air Quality Standards (NAAQS) were developed as part of the CAAA. The NAAQS are health-based standards, and were established by the Environmental Protection Agency (EPA) to protect human health and the environment. Major source thresholds will vary depending upon the local attainment status for a pollutant with an established NAAQS. The majority of Fort Wainwright's cantonment area is located within an area that is in attainment with the NAAQS, with the exception of carbon monoxide (CO) standards.

The Fort Wainwright ASP involves constructing a facility to load tactical vehicles with ammunition. The proposed action includes the construction of a scale house and a covered vehicle upload area. This facility is required to process approximately 150 short tons of military munitions (Class 1.5) and upload onto tactical vehicles in preparation for strategic air deployment within a specified timeline.

Refrigeration: No new refrigeration units will be installed for this project.

Standby Steam: No boilers or equipment to support comfort heat will be installed at the ASP. Primary heat for the ASP will be provided through the existing utilidor that is connected to the Central Heat and Power Plant (CHPP) on Fort Wainwright.

Standby Electricity: Electricity provision to the ASP will be supplied by the CHPP. Emergency backup generators will not be installed as part of this project.

a. Environmental Consequences of Alternative A, No Action: Under this alternative, Fort Wainwright would not construct the proposed ASP. Therefore, there would be no increase in air emissions as a result of power sources.

b. Environmental Consequences of Alternative B, New Construction Option 1, and Alternative C, New Construction Option 2: There would be several sources of direct emissions as a result of the proposed action. These sources can be further subcategorized into two broad classes of emissions: temporary construction and mobile source emissions.

Currently, the proposed action's construction is scheduled to begin in 2003 and with completion in 2005. In general, the construction season is six months or less in the Fairbanks area; therefore, emissions associated with the construction of the facility would be temporary and transient in nature.

Vehicle traffic is expected to increase during the construction phase from the operation of heavy equipment. Construction vehicle emissions are expected to produce the following pollutants: hydrocarbons, nitrogen oxides and carbon monoxide.

The air emissions resulting from the construction process will include fugitive dust emissions from soil agitation and byproducts from the combustion of fossil fuels from operation of construction equipment and metal welding processes.

Currently, the area where the proposed action will take place is not paved. Heavy equipment such as scrapers and cement mixers would be used to pave the area, prior to the start of the facility construction. During this time period, generation of fugitive emissions would be greater; however, these emissions are expected to decrease significantly as the paving is completed and facility construction is initiated. The proposed location for the ASP is well within the boundaries of the installation; therefore it is unlikely that fugitive dust will extend beyond the installation boundary.

The contractor responsible for the construction projects will be required to maintain excavations, embankments, stockpiles, haul roads, permanent and temporary access roads, and all other project activities in or outside the project boundaries to minimize fugitive dust. A fugitive dust-monitoring plan will be implemented to minimize construction emissions and to prevent emissions from migrating off the installation. The contractor responsible for the construction activities will be required to control fugitive dust, such as the application of water around the construction area and locations where building debris is temporarily stored. These actions and others will minimize nuisance dust and mitigate any air quality impacts. Air emissions other than fugitive dust will also be generated by the operation and use of heavy equipment during demolition activities. However, proposed construction operations are not expected to exceed PSD thresholds and will be temporary in nature.

The additional vehicles associated with construction would result in an increase in some pollutant emissions, but would be temporary in nature and would predominately occur during the summer months when temperature inversions are unlikely to occur.

After the project is completed and the facility is operational, the primary air quality concern associated with the proposed action is the potential for periodic peak concentrations of vehicular emissions generated from vehicle exhaust, particularly during deployment exercises and actual deployments. During periods of extreme cold temperatures, vehicle exhaust produces small, particle-size ice crystals that are a significant contributor to the presence of ice fog. Ice fog degrades the air quality since it obscures visibility greatly. During temperature inversions, which primarily occur during the winter months, vehicle exhaust can become trapped low to the ground and persist in

areas for an extended time period. This phenomenon would be of particular concern during deployment exercises.

Based on the data reviewed to date, this construction project shows little to no impact on the existing air quality in the Fort Wainwright area. A Record of Non-Applicability is not required for this project, since the alternative site locations lie outside the non-attainment area for carbon monoxide. However, a comprehensive RONA covering stationary and mobile source vehicle emissions can be found in the EA entitled "Construction for the Alert Holding Area and Pallet Processing Facility, Fort Wainwright, Alaska", August 2002 (USARAK 2002).

2. Water Quality/Wetlands:

The Fort Wainwright cantonment area lies entirely within the Tanana River drainage basin. Depending on specific location, drainage may flow into several different rivers and creeks that feed the Tanana River system. A list of these rivers and creeks includes: Tanana River, Chena River, Flood Channel B, and Clear Creek. The most likely rivers to be affected by the construction of the ASP are the Chena River and the Tanana River. These systems have been classified as having good water quality. Generally, streams, creeks, ponds, lakes and rivers have pH values within ADEC standards. The Tanana River contains sediment loadings that would average between 300 mg/l during periods of high stream flow and 5 mg/l during quieter periods. The U.S. Fish and Wildlife Service's (USFWS) National Wetlands Inventory Program has classified a small percentage of the Fort Wainwright cantonment area as wetlands. The U. S. Army Corps of Engineers Regulatory Branch has confirmed this classification. Wetlands are most commonly found in the alluvial valley floors that are underlain by permafrost. Concerns for groundwater quality are contained in the *Administrative Record* of the Defense Environmental Restoration Activity (DERA) clean-up program being administered by the U. S. Army, the EPA and the ADEC for Fort Wainwright (USARAK 1994).

a. Environmental Consequences of Alternative A, No Action: Under this alternative, Fort Wainwright would not construct the proposed ASP. Therefore, there would be no detrimental impacts to water quality or wetlands.

b. Environmental Consequences of Alternative B, New Construction Option 1, and Alternative C, New Construction Option 2: Vehicular traffic and parking would have indirect detrimental effects on surface and groundwater pollution at Alternative sites B and C. This degradation occurs in three methods:

(1) Leaks, drips and seeps of petroleum products from vehicles collect on parking lot surfaces and are then washed into watersheds by subsequent snowmelt or rainfall.

(2) The impervious nature of parking lots create mini-flood episodes during snowmelt and rainfall. These episodes increase turbidity in adjacent water bodies and may degrade water quality.

(3) Petroleum hydrocarbons from either spills or vehicle exhaust would dissolve in water or accumulate in snow and may degrade water quality.

The significance of these parking lot discharges would be compounded by the nature of spring breakup in the sub-arctic. Generally, parking lots would thaw due to low albedo (high solar absorption) and begin producing water weeks before the ground thaws. With the ground still frozen and unable to absorb water, runoff is significantly enhanced and therefore problematic.

The U.S. Army Corps of Engineers Regulatory Branch has determined that alternative site locations B & C for the ASP require a wetlands permit prior to construction (Appendix A).

3. Floodplain:

All of the alternative sites lie within the 100-year floodplain for both the Chena and Tanana Rivers with average depths of less than one foot or with drainage areas less than one square mile. All of the alternative sites are protected from the 100 year flood with levees. Compliance with Executive Order 11988, 1977, Floodplain Management is required stating that structures cannot impede or channalize flow. The Chena River Flood Control Project protects this portion of the floodplain. Fort Wainwright last flooded in September of 1967.

a. Environmental Consequences of Alternative A, No Action: Under this alternative, Fort Wainwright would not construct the proposed ASP. Therefore, there would be no floodplain/waterway impact.

b. Environmental Consequences of Alternative B, New Construction Option 1, and Alternative C, New Construction Option 2: Complete avoidance of the floodplain is not possible. None of the alternatives impede or channalize flow from the floodplain, therefore mitigation measures do not need to be addressed. Moreover, no practicable alternatives to placement of a new ASP exist outside the floodplain.

D. Biological and Ecological Factors:

1. Fisheries: The Chena River is a tributary of the Tanana River and originates in a mountainous area about 90 miles east of Fairbanks. The river flows southwest from its headwaters to its confluence with the Tanana River in Fairbanks, passing directly through the cantonment area of Fort Wainwright North Post. Much of the surrounding area is underlain with permafrost. Several sloughs can also be found in the area.

The main fish species found in the Chena River watershed include arctic grayling (*Thymallus arcticus),* chinook salmon (*Oncorhynchus tshawytscha*), and chum salmon (*Oncorhynchus keta*). Other species include whitefish, sheefish, burbot, arctic lamprey, northern pike, and slimy sculpin. The salmon species and their habitats are considered Essential Fish Habitat under the Magnuson-Stevens Conservation and Management Act.

The macroinvertebrate fauna of the Chena River is dominated by insects, with the Chironomidae (midges) dominating. Less than 10 percent of the macroinvertebrates are non-insect taxa such as oligochaetes and nematodes, mollusks, and mites (Oswood et al, 1992).

a. Environmental Consequences of Alternative A, No Action: Under this alternative, Fort Wainwright would not construct the proposed ASP. Therefore, there would be no detrimental impacts to fisheries.

b. Environmental Consequences of Alternative B, New Construction Option 1, and Alternative C, New Construction Option 2: There is a dry slough that runs east-west to the south, but there is no evidence of runoff from this site to the slough. There would be no or, at most minor, detrimental impacts to fisheries, with implementation of the Storm Water Pollution Prevention Plan.

2. Vegetation: Vegetation patterns are influenced by climate, soil, topography (slope, aspect, and elevation), depth to water table, permafrost, and fire. Native vegetation was removed from much of the Main Post during original construction of Ladd Field in the 1940s. Due to landscaping and other human activities, vegetation of the Main Post does not reflect natural vegetation patterns of the area (Nakata Planning Group 1987). The cantonment area, south of the Chena River, is almost completely human modified.

The cantonment area generally consists of roads, housing, offices, barracks, hangars, airfields and other urban facilities. This is the primary area where new infrastructure construction takes place. Most of the cantonment has already been modified to a landscaped environment. Areas that are still in their natural state are on the fringes of the cantonment, closer to the training areas. Landscaped lawns, overgrown lots and second growth woodlands are the dominant vegetative types found in the area. Trees species that can be found are *Picea glauca* (white spruce), *Picea mariana* (black spruce), *Populus balsamifera* (balsam poplar), and *Betula papyrifera* (Alaska paper birch).

There is limited commercial quality and/or quantity of timber in the cantonment area. The primary commercial market in the area is birch and spruce for personal use firewood and white spruce house logs. Most of the birch and spruce stands in the cantonment area have been designated as firewood cutting areas IAW Army Regulation 200-3, *Natural Resources - Land, Forest, and Wildlife Management* and the USARAK Timber Policy. Alternative site locations B & C contain approximately 3,200 cubic ft. of usable timber of which approximately 60% is birch and white spruce, and 40% is balsam poplar and aspen.

a. Environmental Consequences of Alternative A, No Action: Under this alternative, Fort Wainwright would not construct the proposed ASP. Therefore, there would be no detrimental impact to vegetation.

b. Environmental Consequences of Alternative B, New Construction Option 1, and Alternative C, New Construction Option 2: Direct impacts to vegetation are severe, given the complete clearing of timber and vegetation resources. Other impacts are further discussed in the cumulative impacts section of this assessment.

3. Wildlife/Endangered Species: At least 70 different species of songbirds seasonally inhabit the Chena River watershed. Songbirds are considered to include birds not only of the perching order (passerines) but also kingfisher, and woodpecker orders. Possibly 19 species of raptors occur within the Chena River watershed. Upland game birds found in the Chena Watershed include spruce, ruffed and sharp-tailed grouse, and rock and willow ptarmigan. Waterfowl include ducks, geese, and swans. Most species of waterfowl are migratory to some extent, with many participating in lengthy seasonal movements. Thus, habitat features for different species or species groups will vary considerably throughout the year, both as a result of geographic availability and by demands placed upon the species as a result of seasonal behavior.

Waterfowl nest throughout the watershed in sloughs, oxbow lakes, ponds, and marshes during late May and June. Ice and snow prevent earlier nesting. The young must be fledged before the onset of adverse weather in the fall. The Chena River watershed also supports breeding habitat for merganser, scoter, goldeneye, bufflehead, oldsquaw, and harlequin ducks. Of this group, goldeneye, bufflehead, and common mergansers are cavity nesters. Marsh and shorebirds in the Chena River watershed include coots, plovers, sandpipers, and phalaropes. These species are present in the watershed only during breeding season. They do not overwinter in the Fairbanks area.
A number of wildlife species are found within the cantonment area on Fort Wainwright. A current list of species within the Fort Wainwright area can be found in Appendix F in the Integrated Natural Resource Management Plan 2003-2007 (USARAK 2003).

Mammals that inhabit the riparian habitat and wetlands in the project area include beaver, fox, muskrat, mink, otter, voles, shrews, red squirrels, lynx, marten, black bears and moose.

Species that may be found in the cantonment area on or near the proposed construction sites include woodchucks, a variety of small mammals, ground-nesting birds and other species that are attracted to human modified, vegetated landscapes.

The American peregrine falcon (*Falco peregrinus anatum*) and the Arctic peregrine falcon (*Falco peregrinus tundrius),* are recently delisted species, and are known to subsist within the area. There are three known American peregrine falcon nests in the vicinity of the Salcha River that lies east of the Yukon Maneuver Area near Eielson AFB. Arctic peregrine falcons migrate throughout the area.

a. Environmental Consequences of Alternative A, No Action: Under this alternative, Fort Wainwright would not construct the proposed ASP. Therefore, there would be no detrimental impact to wildlife and endangered species.

b. Environmental Consequences of Alternative B, New Construction Option 1, and Alternative C, New Construction Option 2: Some wildlife use occurs on these sites as well as the periphery of these sites. Paper birch, balsam poplar, aspen and white spruce are the primary tree species on the sites, providing cover and forage for birds, small mammals and temporary shelter/forage for migrating or larger species. Moose also bed down in the area and travel through on their way to browse material near the road. The construction of an ASP, at either proposed location, would result in the loss of some wildlife habitat, but there would be only insignificant affects on the large and small mammals and birds, which could inhabit nearby areas. There are no threatened and endangered species on proposed sites. The habitat available would not support them, due to the fragmented urban surroundings. Formal coordination with the USFWS under Section 7 of the Endangered Species Act of 1973 is located in Appendix B.

E. Cultural Factors:

Additional information regarding cultural resource factors in Alaska can be found in Appendix C of this EA.

Cultural resources include features and objects dating to the prehistoric and historic periods that are found or are likely to be found as defined by the National Historic Preservation Act (NHPA) of 1966 (as amended). Cultural resources relating to the NHPA and the Native American Graves Protection and Reparation Act (NAGPRA) are considered as part of the EA process. Management of cultural resources on federal lands depends on eligibility of resources for inclusion in the National Register of Historic Places (NRHP).

Although a range of cultural resources potentially occurs on Fort Wainwright Main Post, only two Districts and one Site have been determined eligible for management under NHPA.

Alaska's earliest inhabitants were nomadic hunters traveling in small bands. They arrived in Interior Alaska at least 13,000 years ago, beginning a habitation that persisted through the arrival of European traders in the late 1810s. The region's ice-free, steppe-tundra environment during the Wisconsin Ice Age set the stage for this long habitation.

The nomadic lifestyle of Alaska's earliest inhabitants, the organic nature of the materials they manufactured and used, and changed environmental conditions have made it difficult to find evidence of their cultures. Evidence is generally limited to lithic (stone) artifacts such as projectile points, cutting tools, scrapers, waste flakes from the manufacturing of these tools, and hearths. Archaeologists generally divide Interior Alaska's prehistory into three broad archaeological themes according to the tools and tool making technology of the three prehistoric groups that inhabited the region at various ties. These are:

- the Paleoarctic Tradition (12,000-8,000 years ago) -- No sites that can be assigned to this time period have been found on the Main Post;

- the Northern Archaic Tradition (6,500-1,000 years ago) -- No sites that can be assigned to this time period have been found on the Main Post; and
- the Athabascan Tradition (2,500-150 years ago) -- No sites that can be assigned to this time period have been found on the Main Post.

The history of Interior Alaska can be divided into four historic themes according to various kinds and levels of Euro-American activities. These are:

- Early Contact (1810-1880s) -- Several village sites associated with the early contact period have been reported near Fort Wainwright Main Post; two just northwest of the Fort's boundary and one near Fairbanks. None have been found on the Main Post;
- The Gold Rush (1880s-1928) -- No sites associated with early mining have been found on Main Post;
- Development of Transportation and Communication Networks (1890s-1910s) -- An overland trail was established in 1899 from Valdez to Eagle and later to Fairbanks. The original Valdez/Fairbanks Trail crossed the Main Post and followed what is now Gaffney Road); and
- Military Activities (1890-present) – Ladd Field was designated as a National Historic Landmark in 1984 for its role in World War II, cold weather testing and the Lend Lease Program. The Ladd Air Force Base Historic District was determined eligible for inclusion in the National Register of Historic Places in 2000 for its significance in the Cold War Historic Context.

No Traditional Cultural Properties or Sacred Sites have been identified or reported on the Main Post.

Eight archaeological surveys have been conducted on Fort Wainwright Main Post. These surveys have either focused on high potential areas of Fort Wainwright, or have been related to construction projects. Survey sites include the southern slopes of Birch Hill, various barrow sources just south of the cantonment area, and small arms ranges between the Richardson Highway and Tanana River.

Six archaeological sites have been found on Fort Wainwright Main Post, located north of the Chena River and along the southern slopes of Birch Hill. Only one site has been evaluated for eligibility for inclusion in the National Register of Historic Places and it was determined not eligible. The remaining five sites have not been evaluated.

The entire Fort Wainwright Main Post has been inventoried and evaluated for eligibility for inclusion in the National Register of Historic Places under the World War II and Cold War historic contexts. Under the World War II context, Ladd Field has been designated a National Historic Landmark. The Ladd Field National Historic Landmark includes 37 buildings and structures centered on the runways.

Under the Cold War context, the Main Post has been inventoried and evaluated with 70 buildings and structures centered on the runways contributing to the Ladd Air Force Base

Historic District. This historic district was determined eligible for inclusion in the National Register of Historic Places but not formally nominated or listed.

The primary impacts to cultural resources under the proposed project could involve, but are not limited to, ground disturbance at identified archaeological sites and/or visual impacts to historic properties or districts. Specifically, one historic property listed in the National Register of Historic Places is present on Fort Wainwright Main Post: the Ladd Field National Historic Landmark (NHL). There is also one historic property determined eligible for listing in the NRHP: the Ladd Air Force Base Historic District. No archaeological sites have been determined eligible for listing in the NRHP on Fort Wainwright Main Post, however there are a number of sites that have not been evaluated for eligibility. Housing on Fort Wainwright falls under the Army's Program Comments and no further consultation is required.

Analysis of potential cultural resource impacts is based on the nature of proposed activities, and their potential to affect cultural resources. The following categories will be used in assessing potential impacts:

- No Historic Properties Affected – There are no known or expected historic properties in the area of potential affect of the undertaking.
- No Historic Properties Adversely Affected – There are known historic properties in the project's area of potential affect but that the proposed undertaking does not impact the qualities of the historic property that makes it eligible for listing in the National Register of Historic Places.
- Historic Properties Adversely Affected – There are known historic properties in the project's area of potential affect and the proposed undertaking will have an impact on the qualities of the property that makes it eligible for listing in the National Register of Historic Places.

a. Environmental Consequences of Alternative A, No Action: Under this alternative, Fort Wainwright would not construct the proposed ASP. Therefore, there would be no detrimental impacts to cultural resources.

b. Environmental Consequences of Alternative B, New Construction Option 1, and Alternative C, New Construction Option 2: Under these options, No Historic Properties are Affected.

However, the proposed project has the potential to adversely impact the Ladd Air Force Base Historic District. The proposed project location is directly adjacent to the ammunition igloo complex, which is a contributing element to the historic district. If the design of the proposed work does not meet the Secretary of Interior's Standards for the Treatment of Historic Properties, it will have an adverse visual impact to the historic characteristics of the ammunition igloo complex that makes it eligible for listing in the National Register of Historic Places. Section 106 review and compliance will be initiated once a design is available to assess impact to the historic district.

Although the proposed project introduces elements that may adversely affect the historic characteristics of the Ladd Air Force Base Historic District, it does not have a cumulative impact that would jeopardize the eligibility of the entire historic district.

F. Land-Use Factors:

1. Public Access/Recreation: USARAK maintains an interactive relationship with local communities by providing many recreational opportunities to the public. Fort Wainwright has numerous recreational opportunities for members of the military and civilian communities. Hunting, fishing, and trapping are important natural resources-based forms of outdoor recreation. In addition to those activities, there is a wide range of natural resources-related recreational opportunities at Fort Wainwright. They range from active recreational outlets such as hiking, boating, camping, skiing, and ORV use to lower impact activities including picnicking, camping, snowshoeing, dog mushing, boating, and berry picking, downhill and cross-country skiing, mountain biking, skeet/trap shooting, archery, and similar activities.

Two wildlife viewing platforms and interpretative panels have been installed in locations overlooking the Chena River. Bike paths have been expanded in the past five years.

Fort Wainwright is managed for a number of different types of public recreational use. USARAK uses the following classification system to classify recreation areas on the installation (FWA INRMP 2003-2007).

- ***Open recreational areas*** are open to all types of recreation during all seasons, unless closed by the Fort Wainwright Range Control or the Post Commander.
- ***Modified recreational areas*** are open to hunting, fishing, trapping, hiking, skiing, and berry picking, but they do not support and are not open to any type of off-road vehicle activity, except in the winter.
- ***Limited recreational areas*** are open to hunting & trapping (as regulated by the Alaska Department of Fish & Game), fishing, hiking, skiing, and berry picking, but they do not support and are not open to any type of off-road vehicle use at any time.
- ***Off-limits areas*** are restricted to public access and use year-round.
- ***Motorized Watercraft Trails.*** In summer all motorized watercraft may use only existing naturally occurring channels, watercourses, and waterways of the Wood and Tanana rivers and the Salchaket Slough. No one may enter any impact area. Motorized watercraft are not permitted to leave the open water channels of the Tanana and Wood rivers or any of the sloughs and creeks and enter sensitive wetlands. In the winter, any type of off-road vehicle may use defined trails as long as water is frozen.

Other compatible uses include natural resources management, habitat improvement, firewood and Christmas tree sales. Hunting, trapping and ORV use is not authorized in the cantonment area. These activities are allowed on a limited basis on or across the Chena River, in the local training areas.

The Fort Wainwright Outdoor Recreation Center provides equipment, information, and programs to encourage and enhance the recreational use of Alaska's natural resources by the Fort Wainwright community.

There are some excellent trails and facilities on post. There are also recreational opportunities within easy driving distance of Fort Wainwright that are not necessarily associated with the military.

a. Environmental Consequences of Alternative A, No Action: Under this alternative, Fort Wainwright would not construct the proposed ASP. Therefore, there would be no detrimental impacts to recreation.

b. Environmental Consequences of Alternative B, New Construction Option 1, and Alternative C, New Construction Option 2: Recreational activity at or near the proposed construction sites has been designated as limited (FWA INRMP 2002-2006). Hunting and ORV use are not allowed south of the Chena River on FWA Main Post. There is no evidence that there is any organized recreational activity, or use of ORVs or other motorized vehicles for recreational purposes, occurring in the area.

G. Socioeconomic Factors:

The Proposed Action would result in about $11 million for design and construction of proposed facilities. Most of this money would be spent in the Fairbanks North Star Borough. Construction could temporarily increase population and employment levels, particularly during the short summer construction season.

a. Environmental Consequences of Alternative A, No Action: Under this alternative, Fort Wainwright would not construct the proposed ASP. Therefore, there would be no changes in the current social economic status.

b. Environmental Consequences of Alternative B, New Construction Option 1, and Alternative C, New Construction Option 2: Operation of the facilities would not significantly permanently impact demographic numbers or characteristics since such operations do not impact military or civilian employment at Fort Wainwright. The Proposed Action would not affect public facilities, utilities, transportation systems, or services. However, monies spent on local supplies and employment of local contractors/businesses would temporarily be beneficial to the local economy.

1. Environmental Justice**:**

The purpose of Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority and Low-income Populations* dated 11 February 1994, is to avoid disproportionate placement of adverse environmental, economic, social or health effects from federal actions and policies on minority and low-income populations. The process requires identification of minority and low-income populations that may be effected by implementation of the proposed action or alternatives.

a. Environmental Consequences of Alternative A, No Action: Under this alternative, Fort Wainwright would not construct the proposed ASP. Therefore, there would be no effects to environmental justice.

b. Environmental Consequences of Alternative B, New Construction Option 1, and Alternative C, New Construction Option 2: The process has resulted in the following findings: (1) The addition of the ASP would not result in any adverse impacts on the social, safety or health of minority or low-income populations. (2) There is expected to be no effects on any social, and only beneficial economic effects on the surrounding population.

2. Human Health/Safety:

AR 385-64 "Explosives Safety" requires certain Quantity-Distance criteria be met for the storage of explosives in relation to inhabited buildings and public traffic routes. These criteria have been met with alternative site locations B & C, and a preliminary site plan request is currently routing through Army channels.

Standard operating procedures with regard to the handling of explosives during deployment exercises will be implemented to ensure the security and safety of the personnel involved.

Under Executive Order 13045, *Protection of Children From Environmental Health Risks and Safety Risks*, dated 21 April 1997, federal agencies are required to ensure that policies, programs, activities, and standards address disproportionate risks to children resulting from environmental health risks or safety risks. The purpose of the EO is to identify and assess environmental health risks and safety risks that may disproportionately affect children.

a. Environmental Consequences of Alternative A, No Action: Under this alternative, Fort Wainwright would not construct the proposed ASP. Therefore, there would be no effects to human health and safety.

b. Environmental Consequences of Alternative B, New Construction Option 1, and Alternative C, New Construction Option 2: Standard operating procedures regarding the storage and handling of explosives will be used for the operation of the ASP. The Army has analyzed the proposed action for alternative sites B and C, and found that there would be no environmental health risks or safety risks associated with the action, which would disproportionately affect children.

IV. CUMULATIVE IMPACTS FROM THE PROPOSED ACTION AND ALTERNATIVES

The following is a list of cumulative environmental impacts, defined under CEQ Reg 1508.7 and 32 CFR part 651, related to all alternatives. Cumulative impacts result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. Cumulative effects can also result from individually minor but collectively significant actions taking place locally or regionally over a period of time.

Subjects that are not specifically referenced in this section have either no cumulative impacts or relatively minor environmental impacts, and have therefore been eliminated from discussion. Cumulative impacts for construction of the ASP have been summarized in Figure 3.

A. Cantonment Area: Numerous projects are planned in the vicinity of the Fort Wainwright cantonment area, including the proposed alternative site locations. While these projects are independent of the proposed action described in this EA, it is nevertheless appropriate to consider impacts associated with the preferred and other alternatives in light of these independent projects.

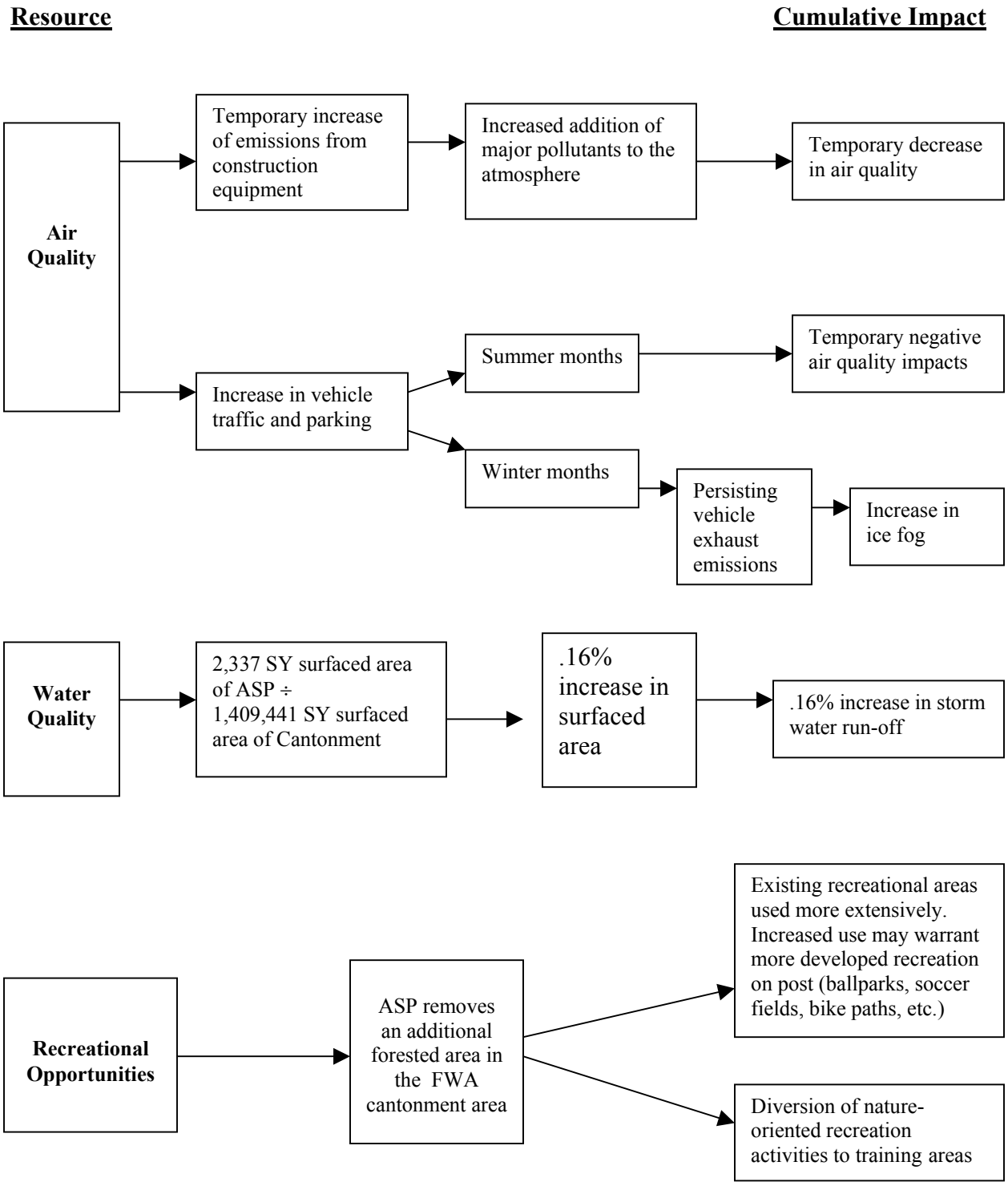
The proposed action is another action in this process. The project continues the development of the cantonment area, which is a cumulative impact. However, this development is planned, has minimal environmental impacts, sufficient mitigation, and is required to support the USARAK military mission at Fort Wainwright.

Other projects include upgrades to the power plant, on-post housing renovation projects, construction of battalion and company operations facilities, motor pool and assembly building, and range upgrades.

B. Air Quality: The generation of temporary emissions from construction equipment and increased vehicular traffic from construction worker's personal vehicles could impact air quality; however, these impacts would be of short duration and temporary in nature. Most of the construction activities are expected to occur during the summer months, when pollutants generated from these sources would likely dissipate rapidly. Since the facility is designed to provide parking for vehicles, there could be detrimental impacts to air quality. This is of primary concern during winter months when temperature inversions could cause vehicular exhaust emissions to persist in the area.

Given this increase in parking, traffic would also increase at this location, leading to minor and temporary negative air quality impacts.

Figure 3 - Summary of Cumulative Impacts Relating to ASP Construction, Fort Wainwright, Alaska (further described in following sections)



C. Natural Resources:

1. Wildlife and Vegetation*:* There would be a cumulative loss of forested/undisturbed lands within the cantonment area. The reduction of these resources includes birch, spruce, and poplar forest ecosystems along with open wetland meadows and other ecotypes listed within the natural resources management plan. The cantonment area generally consists of roads, housing, offices, barracks, hangars, airfields and other aspects of urban life. The cantonment area is a "city". Areas not designated as training areas are considered in the cantonment area, and this is where most new construction of infrastructure takes place. As construction continues in the FWA cantonment area fragmentation of existing undisturbed habitats would grow forming isolated populations of wildlife and vegetation. Existing areas that are still in their natural state are on the fringes of the cantonment area and are probably used by species that use the much larger undisturbed areas of the training areas. Over time, most of the undisturbed areas would be impacted by the human footprint, and wildlife would be restricted to those that may migrate through (moose, waterfowl) and those birds, small mammals that adapt to a landscaped environment.

Vegetation at the proposed ASP site locations is birch, white spruce, balsam poplar and aspen. This area has been designated as a firewood cutting area and is being considered for a negotiated timber sale. All usable timber will be removed from the site by the time construction begins. Since it is an isolated site, overall loss of the trees and vegetation on site would be of minimal cumulative impact. The cantonment area and the surrounding city and borough continue to grow. Second growth vegetation is found on many abandoned lots, yards and parks.

The cumulative amount of storm water runoff on paved surfaces would increase with the construction of the new facility. Landscaping on site would reduce runoff from rain, hold the soil better and provide an improved and continuous landscaped view to the area.

Overall, most of the cantonment area has already been modified to a landscaped environment. Continued development may no longer have much impact on wildlife due to its adaptation to existing conditions and use of the more natural sites found in the surrounding training areas.

2. Recreation: Recreation would be affected in two ways. Primarily, there would be more developed recreation such as ballparks, soccer fields and bike paths in the cantonment area as a whole. More nature-oriented recreational activities would be directed to the training areas, increasing travel time by only a few minutes. These areas would remain in a natural, undisturbed state to provide sustainable training for soldiers.

V. MITIGATION

As defined in CEQ Regulation 1508.20, "Mitigation" includes the following:

- Avoiding the impact altogether
- Minimizing impacts by limiting the degree or magnitude of the action
- Rectifying the impact through repairing, rehabilitating, or restoring
- Reducing or eliminating the impact over time by preservation and maintenance operations
- Compensating for the impact by replacing or providing substitute resources or environments.

To provide further environmental protection, specific mitigation measures would be strictly enforced.

The ASP mitigation, applicable to all alternatives (shown below in section A) would need to be addressed regardless of the chosen alternative. Mitigation measures listed below in section B are specific to those alternatives or actions.

A. Mitigation Measures Applicable to all Alternatives

1. Architecture: Comply with the scope and design criteria of DOD 4270.1-M, "Construction Criteria," that were in effect 1 January 1987, as implemented by the Army's Architectural and Engineering Instructions (AEI), "Design Criteria," dated 3 July 1994.

2. Engineering: Ensure that arctic engineering concepts are incorporated into facility design that would preclude vapor barrier, warm roof, and other common problems unique to this environment. Ensure that adequate insulation is incorporated into the facility design to reduce excessive use of fossil fuels for facility heat. Ensure that appropriate engineering safeguards are incorporated to ensure Clean Water Act compliance.

3. Snow Removal: Incorporate snow removal operations into the facility design. Ensure that snow avalanches from roofs would not occur in the area of entryways, parking lots, or emergency service areas. Set aside areas in the immediate vicinity of parking lots as temporary snow removal repositories. Parking lot design shall minimize obstructions, as the design process permits, to facilitate the orderly and efficient snow removal and transport by DPW typical equipment.

4. Soils: Stabilize exposed soils and manage storm water runoff using seeding, hay bail placement, siltation fence techniques and other appropriate engineering controls during and post-construction. Reseed all grassy areas disturbed during construction. Comply with the Fort Wainwright landscaping plan.

5. Parking lot: Parking lot design shall provide adequate clear space on the margins for snow deposition during snow removal operations. These sites shall not be within 50

feet of any wetland, water body, creek, slough, or river. As an alternative, appropriate settling basins, diversion dikes or other engineering practices shall be incorporated into the design to insure compliance with the National Pollutant Discharge Elimination System (NPDES) criteria for both rainfall run-off and snowmelt.

6. Air Quality: Enforce a restrictive vehicle idling policy during periods of cold weather. Ensure availability of adequate vehicle head bolt outlets so that vehicles avoid cold starts during periods of extreme cold weather and thereby reduce the amount of vehicular exhaust produced.

7. Timber: Commercial forest products would not be given away, abandoned, carelessly destroyed, used to offset costs of contracts, or traded for products, supplies, or services. All forest products would be accounted for and commercial harvests completed prior to the start of any construction that may impact forest resources. Harvestable timber would be stockpiled. If any harvesting would occur then it would be coordinated with USARAK installation forester. Timber that is stockpiled during construction would also be coordinated through the installation forester (Appendix D). Use existing large white spruce and paper birch in the landscape design if possible.

8. Accidents/Spills: All USARAK units are required to comply with USARAK Regulation 200-1 and USARAK Pamphlet (PAM) 200-1 (USARAK 2000). All units are required to possess and have available appropriate spill response materials for the types and quantities of hazardous materials they may transport. All spills/releases are required to be reported to Fort Wainwright's Fire Department. All spills/releases in USARAK are reported to the Alaska Department of Environmental Conservation (ADEC), Spill Prevention and Response (SPAR) and appropriate mitigation measures are accomplished.

9. Cultural Resources: Concurrence from the State Historic Preservation Officer must occur prior to construction commencement.

B. Alternative B – 'New Construction Option 1', and Alternative C- 'New Construction Option 2'

1. A wetland permit is necessary and must be obtained prior to construction commencement.

2. The contractor would prepare a storm water pollution prevention plan and implement best management practices to stabilize exposed soils and manage storm water runoff.

3. Reseed in areas where trees and/or grasses were removed and construction did not take place. This would help control erosion and maintain soil stabilization.

4. If contamination is encountered, appropriate measures will be taken to address the contamination, including possible remediation of the site.

VI. RECOMMENDATION FOR A FINDING OF NO SIGNIFICANT IMPACT: FINDING OF NO SIGNIFICANT IMPACT

CONSTRUCTION OF AN AMMUNITION SUPPLY POINT, FORT WAINWRIGHT, ALASKA

DESCRIPTION OF ACTION:
U.S. Army Alaska (USARAK) proposes construction of an Ammunition Supply Point (ASP, project number 56922) during 2003 in the cantonment area of Fort Wainwright, Alaska. The proposed project will provide storage, staging, loading and weighing facilities to process military munitions in preparation for strategic air deployment of the 172nd Brigade within a 96-hour deployment timeline.

Three alternatives have been analyzed in this environmental assessment (EA) for the construction of the ASP. Alternative A – 'No Action' proposes no construction activities, leaving a deficiency of adequate munitions supply point, staging, loading, and weighing facilities. Alternative B – 'New Construction, Option 1' proposes construction of a new ASP southeast of the current small arms ammunition storage complex extending south to Old Badger Road and east to Montgomery Road. Alternative C – 'New Construction, Option 2' proposes construction of a new ASP centered south of the current small arms ammunition storage complex extending south to Old Badger Road.

ANTICIPATED ENVIRONMENTAL EFFECTS:

1) There are no anticipated adverse effects (from the proposed alternatives) due to the proposed project on water quality, fish and wildlife or their habitats including threatened and endangered species. Correspondence with the U.S. Fish and Wildlife Service has been completed. There would be direct impacts to vegetation due to construction activities.

2) An Air Quality Conformity Analysis for this project is not required, since the proposed locations fall outside of the carbon monoxide non-attainment area.

3) Consultation with the State Historic Preservation Officer to determine whether there would be adverse effects on historic properties from the alternative site locations must occur prior to construction commencement.

4) Correspondence with the U.S. Army Corps of Engineers Regulatory Office indicates the presence of wetlands. A wetland permit would be necessary prior to construction commencement.

MITIGATION: Mitigation actions, as defined in CEQ Regulation 1508.20, have been incorporated into this Environmental Assessment (EA). ASP mitigation would need to be addressed for alternatives B & C. Additional site-specific mitigation measures are incorporated and compliance is mandatory. These mitigation measures would be reviewed and incorporated in their entirety into any Work Plan, Operations Plan, or

similar document that anticipates the construction of an ASP at Fort Wainwright as outlined in this EA, with adoption of the mitigation measures included therein. Besides vegetation, it has been determined that this project would not have significant effects on the environment, so long as mitigation measures included therein are enforced. Therefore, an Environmental Impact Statement (EIS) is not required.

CONCLUSION: Construction of an Ammunition Supply Point (project number 56922) as described in the preferred and other alternatives do not pose any significant environmental impacts that are not otherwise adequately addressed in the mitigation section of this EA. The No Action Alternative would not address the increasing need for new facilities. After a comprehensive evaluation of all potential impacts, it has been determined that the proposed action in Alternatives B and C would not result in significant impacts. Therefore, a Finding of No Significant Impact (FNSI) will be prepared to accompany this EA. The preferred Alternative C 'New Construction Option 2' has been recommended for selection as the preferred course of action. Mitigation measures contained herein shall be incorporated in their entirety into any Work Plan, Operations Plan or similar document that anticipates the construction of a new ASP at Fort Wainwright as outlined in this EA.

DEADLINE FOR COMMENTS AND POINTS OF CONTACT FOR INFORMATION: Interested parties are invited to submit any written comments or objections they may have concerning the proposed action. Comments would be reviewed, and relevant issues would be addressed and incorporated into a revised EA. If no comments are received during the public comment period, the draft EA will become the final EA. The Public Comment Period begins on the first day upon publication of this notice and extends for 30 days. **For further information, please contact Gale Skaugstad, Environmental Resources Department, United States Army Alaska (USARAK), Directorate of Public Works, Fort Wainwright, Alaska 99703-6500, telephone: (907) 353-3001.**

Fredrick J. Lehman
Colonel, U.S. Army
Garrison Commander

VII. NOTICE OF PUBLIC AVAILABILITY AND PUBLIC COMMENT PERIOD

Army Regulation 32 CFR Part 651, Environmental Analysis of Army Actions; Final Rule, March 2002 implement the National Environmental Policy Act of 1969. Chapter 5 of 32 CFR Part 651 authorizes the preparation of a Finding of No Significant Impact (FNSI) after an Environmental Assessment (EA) review indicates that an Environmental Impact Statement (EIS) is not required.

ACTION: Construction of an Ammunition Supply Point, Fort Wainwright, Alaska.

ENVIRONMENTAL DOCUMENTS: An EA and a mitigated FNSI have been prepared for the proposed project. Copies of these documents are available upon request. Interested parties are invited to submit, in writing, any comments or objections they may have concerning the proposed action. Comments received would be reviewed and relevant issues would be addressed and incorporated into a revised EA. If no comments are received during the Public Comment Period, the original EA would become the final EA. The Public Comment Period begins on the first day upon publication of this notice and extends for 30 days. **For further information, please contact Gale Skaugstad, Environmental Resources Department, United States Army Alaska (USARAK), Directorate of Public Works, Fort Wainwright, Alaska 99703-6500, telephone: (907) 353-3001.**

SUPPLEMENTAL INFORMATION: An EA is prepared to determine the extent of environmental impacts of a proposed action and decide whether or not these impacts are significant. If the proposed action may or would result in significant impacts, an EIS is prepared to provide additional information on the context, duration, and intensity of the impacts. If an EA shows that the proposed action would not result in significant impacts, a FNSI is prepared and the NEPA compliance is satisfied. A FNSI is a document, which briefly presents the reasons why a proposed action would not have a significant effect on the quality of the human environment.

The FNSI documents the decision that an EIS is not required for NEPA compliance. A FNSI is complete when no comment period is necessary, a comment period was held but evidenced no significant public concern, or public concern resulted in reconsideration of the FNSI, which was still appropriate upon re-examination.

Frederick J. Lehman
Colonel, U.S. Army
Garrison Commander

VIII. CONTACTS

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This environmental assessment was prepared by the United States Army Alaska, Directorate of Public Works, Environmental Planning Division. Below is a list of contact personnel who either prepared or edited this assessment.

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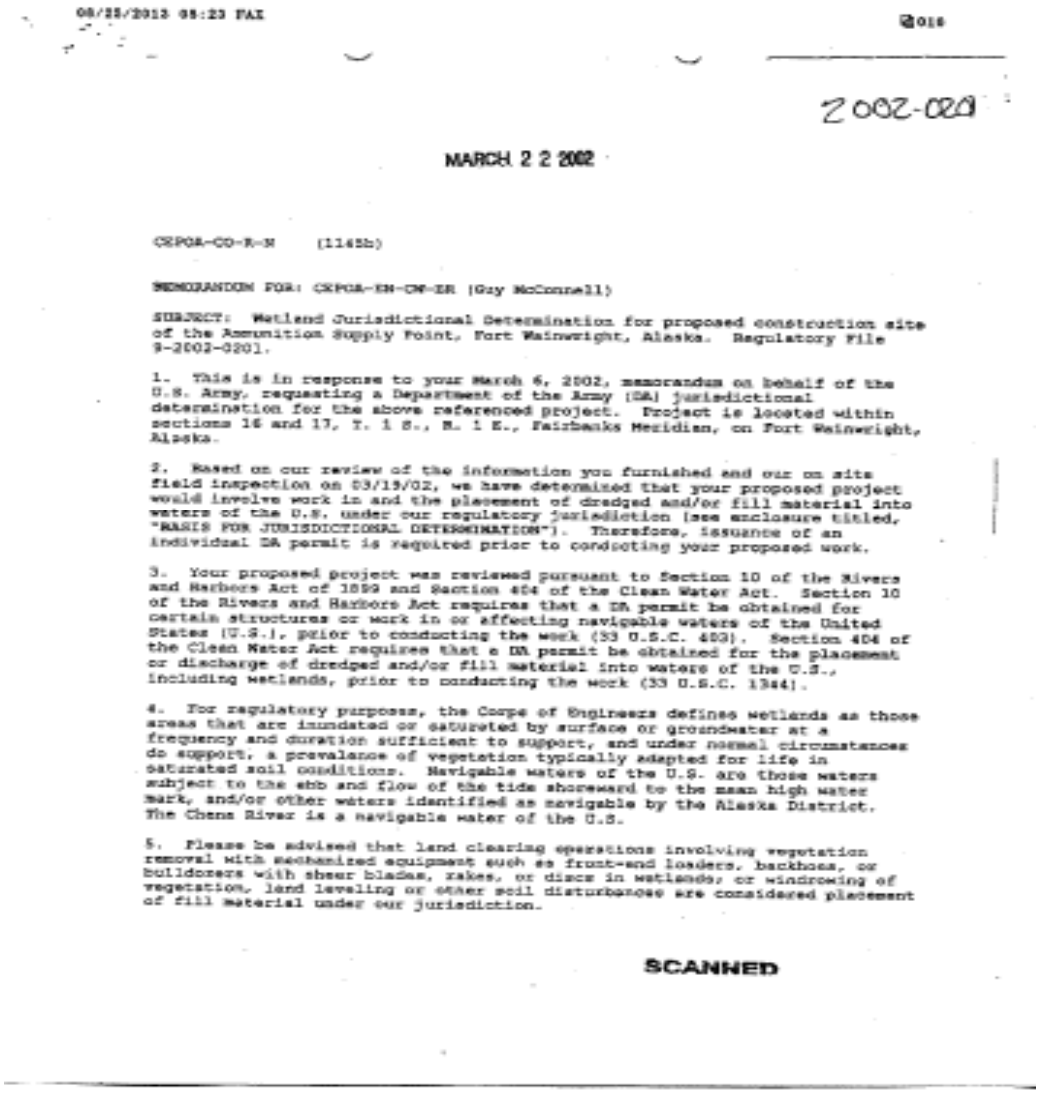
X. COMMON ABBREVIATIONS:

ACM	Asbestos Containing Material
ADEC	Alaska Department of Environmental Conservation
AQCR	Air Quality Control Region
ANILCA	Alaska National Interest Lands Conservation Act
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980, also known as *Superfund* (PL 96-510 et seq.)
CRREL	Cold Regions Research and Engineering Laboratory, headquartered in Hanover, NH.
DOD	Department of Defense
DOTPF	State of Alaska, Department of Transportation and Public Facilities
DMA	Defense Mapping Agency
DPW	Directorate of Public Works
DERA	Defense Environmental Restoration Act. The DOD equivalent to CERCLA (see above)
EA	Environmental Assessment, See Army Regulation 200-2 (32 CFR-Part 651)
EIS	Environmental Impact Statement
E.O.	Executive Order. A binding order issued by the President of the United States.
EPA	Environmental Protection Agency, Region X, headquartered in Seattle
F	(Fahrenheit), a temperature measurement scale wherein water freezes at 32 degrees and boils at 212 degrees at standard atmospheric pressure.
FFA	Federal Facilities Agreement. A legally binding agreement administered by the EPA that specifies *Superfund* (see CERCLA above) clean-up activities, schedules and specifies levels of 'clean'.
FWA	Fort Wainwright, Alaska
IRP	Installation Restoration Plan. The required actions for the long term clean up of *Superfund* known contamination throughout Fort Wainwright, Alaska
NESHAP	National Emissions Standards for Hazardous Air Pollution
NPDES	National Pollution Discharge Elimination System
MIM	Military Installation Map
mg/l	Milligram per liter (approximates one part per million)
RCRA	Resource Conservation and Recovery Act
Superfund	See CERCLA above.
US	United States
USACE	U.S. Army Corps of Engineers
USARAK	United States Army, Alaska
USFWS	United States Fish and Wildlife Service

APPENDIX A

WETLANDS CORRESPONDENCE



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2002-009

MARCH 2 2 2002

CEPOA-CO-R-N (1145b)

MEMORANDUM FOR: CEPOA-EN-CM-ER (Guy McConnell)

SUBJECT: Wetland Jurisdictional Determination for proposed construction site of the Ammunition Supply Point, Fort Wainwright, Alaska. Regulatory File 9-2002-0201.

1. This is in response to your March 6, 2002, memorandum on behalf of the U.S. Army, requesting a Department of the Army (DA) jurisdictional determination for the above referenced project. Project is located within sections 16 and 17, T. 1 S., R. 1 E., Fairbanks Meridian, on Fort Wainwright, Alaska.

2. Based on our review of the information you furnished and our on site field inspection on 03/19/02, we have determined that your proposed project would involve work in and the placement of dredged and/or fill material into waters of the U.S. under our regulatory jurisdiction (see enclosure titled, "BASIS FOR JURISDICTIONAL DETERMINATION"). Therefore, issuance of an individual DA permit is required prior to conducting your proposed work.

3. Your proposed project was reviewed pursuant to Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. Section 10 of the Rivers and Harbors Act requires that a DA permit be obtained for certain structures or work in or affecting navigable waters of the United States (U.S.), prior to conducting the work (33 U.S.C. 403). Section 404 of the Clean Water Act requires that a DA permit be obtained for the placement or discharge of dredged and/or fill material into waters of the U.S., including wetlands, prior to conducting the work (33 U.S.C. 1344).

4. For regulatory purposes, the Corps of Engineers defines wetlands as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalance of vegetation typically adapted for life in saturated soil conditions. Navigable waters of the U.S. are those waters subject to the ebb and flow of the tide shoreward to the mean high water mark, and/or other waters identified as navigable by the Alaska District. The Chena River is a navigable water of the U.S.

5. Please be advised that land clearing operations involving vegetation removal with mechanized equipment such as front-end loaders, backhoes, or bulldozers with sheer blades, rakes, or discs in wetlands; or windrowing of vegetation, land leveling or other soil disturbances are considered placement of fill material under our jurisdiction.

SCANNED

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-2-

6. This approved jurisdictional determination is valid for a period of five (5) years from the date of this letter, unless new information supporting a revision is provided to this office before the expiration date. Should you desire to appeal this approved jurisdictional determination, please contact this office to request additional information on the Administrative Appeals Process.

7. Nothing in this letter shall be construed as excusing you from compliance with other Federal, State, or local statutes, ordinances, or regulations that may affect this work. For informational purposes, a copy of this letter is being sent to the agencies and individuals on the enclosed list.

8. Enclosed is a copy of our Regulatory Program Applicant Information Pamphlet, including a permit application. This pamphlet is designed to assist you in applying for a DA permit and provides general information and guidance on how to complete the permit application. For informational purposes, a copy of this letter is being sent to the agencies and individuals on the enclosed list

9. We appreciate your cooperation with the Corps of Engineers' Regulatory Program. Please refer to file number 9-2002-0201 in future correspondence or if you have any questions concerning this determination. You may contact me at (907) 753-2716, toll free in Alaska at (800) 478-2712, or by mail at the letterhead address, ATTN: CEPOA-CO-R-N.

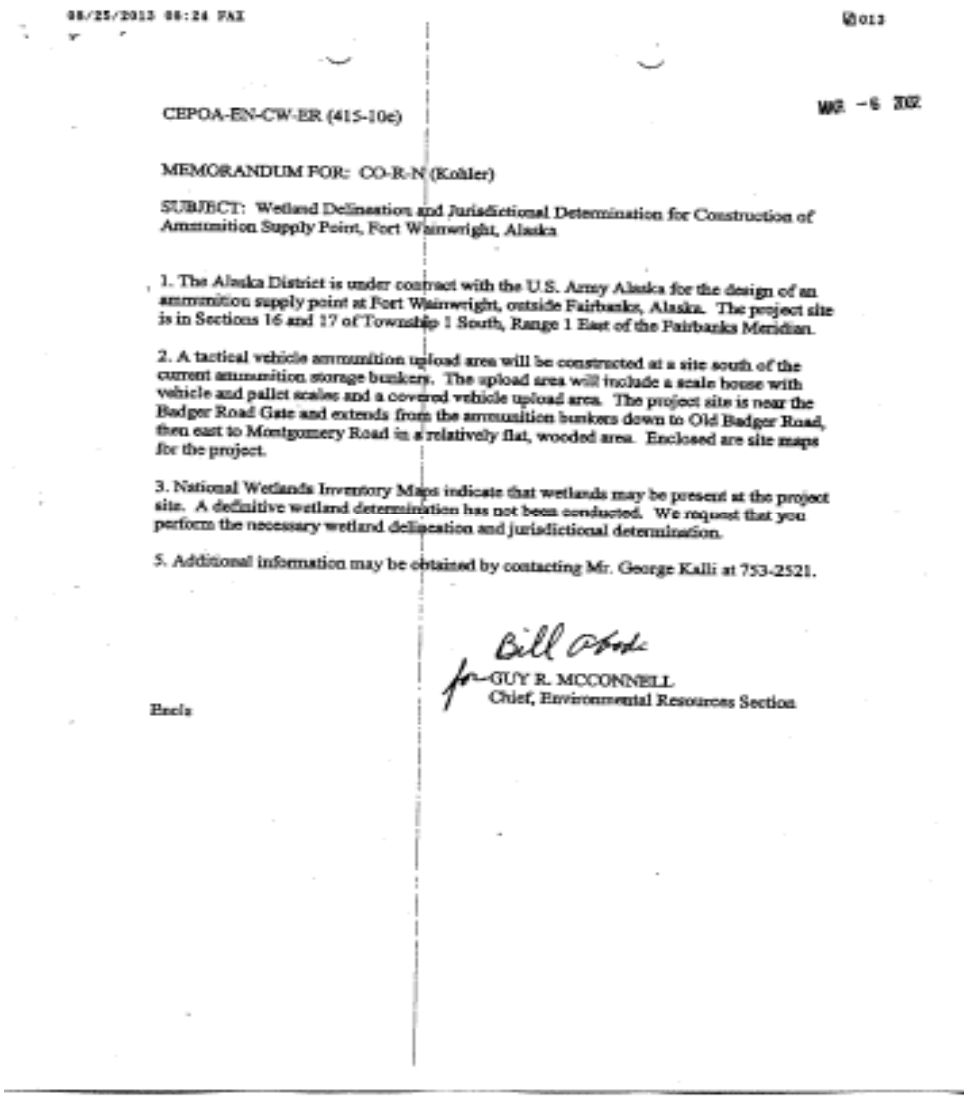
3/22/02

Signed

Gilbert Leroy Phillips
Project Manager

CONCUR
CEPOA-CO
PHILLIPS/lsa/3-2716
GLP|020201jdp|22 Mar 02
(1145b)

Enclosure



08/25/2003 08:24 FAX 013

CEPOA-EN-CW-ER (415-10e) MAR -6 2002

MEMORANDUM FOR: CO-R-N (Kohler)

SUBJECT: Wetland Delineation and Jurisdictional Determination for Construction of Ammunition Supply Point, Fort Wainwright, Alaska

1. The Alaska District is under contract with the U.S. Army Alaska for the design of an ammunition supply point at Fort Wainwright, outside Fairbanks, Alaska. The project site is in Sections 16 and 17 of Township 1 South, Range 1 East of the Fairbanks Meridian.

2. A tactical vehicle ammunition upload area will be constructed at a site south of the current ammunition storage bunkers. The upload area will include a scale house with vehicle and pallet scales and a covered vehicle upload area. The project site is near the Badger Road Gate and extends from the ammunition bunkers down to Old Badger Road, then east to Montgomery Road in a relatively flat, wooded area. Enclosed are site maps for the project.

3. National Wetlands Inventory Maps indicate that wetlands may be present at the project site. A definitive wetland determination has not been conducted. We request that you perform the necessary wetland delineation and jurisdictional determination.

5. Additional information may be obtained by contacting Mr. George Kalli at 753-2521.

Bill Abadie
for GUY R. MCCONNELL
Chief, Environmental Resources Section

Encls

APPENDIX B

U.S. FISH AND WILDLIFE CORRESPONDENCE

United States Department of the Interior
Fish and Wildlife Service
Fairbanks Fish and Wildlife Office
101 12th Ave., Box 19, Room 110
Fairbanks, Alaska 99701
December 5, 2002

12/5/02

Kate Siffar
Directorate of Public Works
Environmental Resources Division
1060 Gaffney Road, #6500
Fort Wainwright, Alaska 99703-6500

Re: Proposed Ammunition Supply Point, Fort Wainwright, AK

Dear Ms. Siffar:

This responds to your request for a list of endangered and threatened species and critical habitats pursuant to section 7 of the Endangered Species Act of 1973, as amended (Act). This information is being provided for a proposed ammunition supply point (ASP) to include a scale house, ammunition upload facility, two ammunition storage igloos, and an exterior vehicle staging area. The proposed location of the ASP is along the southwest edge of Montgomery Road within Fort Wainwright, Alaska.

No listed species occur in these project area and there is no designated or proposed critical habitat in the vicinity of the proposed project. Therefore, the Service concludes that this project is not likely to adversely impact listed species. Preparation of a Biological Assessment or further consultation under section 7 of the Act regarding this project is not necessary.

This letter applies only to endangered and threatened species under our jurisdiction. It does not preclude the need to comply with other environmental legislation or regulations such as the Clean Water Act.

Thank you for your cooperation in meeting our joint responsibilities under the Act. If you need further assistance, please contact Jonathan Priday at (907) 456-0499.

Sincerely,

Ted Swem

Ted Swem
Branch Chief
Endangered Species

APPENDIX C

CULTURAL RESOURCES

INTERIOR ALASKA PREHISTORY

Alaska's earliest inhabitants were nomadic hunters traveling in small bands. They arrived in Interior Alaska at least 13,000 years ago, beginning a habitation that persisted through the arrival of European traders in the late 1810s. The region's ice-free environment during the Wisconsin Ice Age set the stage for this long habitation period. At that time the region was a treeless steppe-tundra environment, supporting migrating herds of grazing animals, such as bison, horse, and mammoth that these early peoples successfully preyed upon.

The nomadic lifestyle of Alaska's earliest inhabitants, the organic nature of the materials they manufactured and used, and changed environmental conditions have made it difficult to find evidence of their cultures. It is generally limited to lithic (stone) artifacts such as projectile points, cutting tools, scrapers, waste flakes from the manufacturing of these tools, and hearths. Archaeologists generally divide Interior Alaska's prehistory into three broad archaeological themes according to the tools and tool making technology of the three prehistoric groups that inhabited the region at various times. These are the Paleoarctic Tradition (12,000-8,000 years ago), the Northern Archaic Tradition (6,500-1,000 years ago), and the Athabaskan Tradition (2,500-150 years ago).

Paleoarctic Tradition

The Paleoarctic Tradition represents the earliest human group known to inhabit Alaska. They camped on terraces, buttes, and bluffs using high ground to locate and track their prey that included large mammals such as mammoth and bison. The treeless environment and nomadic nature of these peoples had a direct impact on the kind of tools they fashioned. Stone, bone, antler, and ivory provided the most abundant material for manufacturing weapons and cutting tools. Artifacts associated with this culture include small stone microblades and microblade cores.

Northern Archaic Tradition

The Northern Archaic Tradition appeared about 6,000 years ago as an adaptation to the forest environment of Interior Alaska and may have persisted until about 1,000 years ago. The appearance of side notched projectile points, a diagnostic tool type for the tradition, indicates that the development of the Northern Archaic culture was related to the expansion of the boreal forest. Artifact assemblages associated with this culture generally contain some, but not all of a variety of tools ranging from bifacial knives and microblades to end scrapers and side notched points.

Athabaskan Tradition

Athabaskans are generally divided linguistically and geographically into subgroups that inhabit or have inhabited Interior Alaska and Canada. Linguistic evidence suggests that the Athabaskan cultural may have appeared in the Tanana Valley as early as 2,500 years ago. Through ethnography, oral history, and a broad array of cultural items, much has been learned about Athabaskan culture and history in the region.

In the Tanana Valley there are four such groupings; the Upper Tanana, Tanacross, Tanana and Koyukon. These are further divided according to geographical location. The Salcha, Chena, Wood River, Goodpaster, and Healy Lake bands are identified according to certain cultural

characteristics and geographic areas they have traditionally inhabited. Bands of the Tanana and Tanacross are associated with the geographic area that embodies Fort Wainwright.

Athabaskan settlement patterns depended greatly on the availability of subsistence resources. Interior bands lived a nomadic lifestyle, depending to a greater extent on terrestrial animals for sustenance. They often traversed vast areas to support themselves and spend much of the winter engaged in subsistence activities. It was often necessary for bands to divide into smaller groups to find game. Salmon runs on the Tanana River were smaller, shorter, and less varied and did not form a major subsistence resource. Fish supplemented their diet during the lean winter months when finding game animals was most difficult.

INTERIOR ALASKA HISTORY

The history of Interior Alaska can be divided into four historic themes according to various kinds and levels of Euro-American activities. These are Early Contact (1810s-1880s), The Gold Rush (1880s-1928), Development of Transportation and Communication Networks (1890s-1910s), and Military Activities (1890s-present).

Early Contact, 1810s-1880s

Russian fur traders entered Interior Alaska from the south in the 1810s, establishing a post at Taral on the Copper River, and from the west in 1830s, establishing a post at Nulato on the Yukon River. British traders from the east established Fort Yukon where the Porcupine River joins the Yukon River in 1847. Trade goods from Nulato may have made it to Tanana Athabaskans through Native middlemen and then to groups further up the Tanana. Goods form the Copper River post may have been traded to Upper Tanana Athabaskans by the Ahtna and then groups further down the Tanana.

Contact between Tanana Athabaskans and white traders increased after the 1860s. The Salcha traded with Russian and British traders at Nuklukayet (modern day Tanana) during the 1860s. With the U.S. purchase of Alaska in 1867, control of trading stations and the fur trade passed to Americans. Through the 1880s American traders established several posts on the Yukon and Tanana Rivers, including locations at Nuklukayet, Belle Isle (modern day Eagle) and Fort Yukon.

As they became increasingly dependent on traders, Natives began to live a more sedentary lifestyle. “Guns allowed them to obtain game with greater efficiency. Clothing, staples, tools, and other necessities could be obtained through trade. They began to abandon their traditional seasonal hunting rounds for more permanent settlements.

The Gold Rush, 1880s-1928

In 1886 gold was discovered at Franklin Creek and Chicken Creek on the Fortymile River, bringing several hundred white settlers into the Tanana region. In 1894 gold was discovered on Birch Creek and Circle City was established, bringing another influx of settlers to the region northeast of present day Fairbanks. Prospectors used a trail established by the Salcha band to gain access to the Tanana Valley form Circle City.

A trading post was established at Chena at the confluence of the Chena and Tanana Rivers in 1900. In 1902, E.T. Barnette established a trading post at the future town site of Fairbanks. That same year, Felix Pedro, a prospector from Circle City, discovered gold on Pedro Creek, north of Fairbanks. In 1903, John E. Bonnifield struck gold southwest of Fairbanks. Barnette spread word of Pedro’s discovery and a stampede ensued. Within six years the population of Fairbanks swelled to over 15,000.

Most mining activities occurred on creeks to the north of Fairbanks. These activities centered around two types of gold deposits; placer and lode. Easily accessible placer gold deposits were exhausted by 1910. Capital intensive technologies such as dredging were needed to extract remaining placer deposits. The first dredge was established near Fairbanks in 1911. Large scale dredging did not begin until completion of the Alaska Railroad in 1923 made it possible to transport necessary equipment cost effectively.

Development of Transportation and Communication Networks, 1890s-1910s

Riverboat was the primary means of getting people and supplies into the Interior during the early years. Riverboats traveled up the Yukon River from St. Michael on the Bering Sea, to the Tanana River and down the Yukon River form the White Pass & Yukon railhead at Whitehorse, Canada, to the Tanana River. Boats traveled to Fairbanks from June 1 through mid-October.

The U.S. Army developed the Valdez-Fairbanks Trail as an overland trail. It began as a military trail built in 1899 by Captain William Abercrombie from Valdez to Eagle. With the establishment of Fairbanks in 1904 a branch of the trail was extended north from Gulkana to Fairbanks. In succeeding years the trail was upgraded to a wagon road and in 1913 the first automobiles used the road. Roadhouses along the route catered to the pioneers.

Increased mining and trading in Alaska led the Army to consider the need for better communications. Their response was the Washington-Alaska Military Cable Telegraph System (WAMCATS), constructed in sections between 1899 and 1906. One section ran from Fort Liscum to Fort Egbert, crossed the Fortymile region east of Fort Greely, then went down the Tanana River to Fort Gibbon near the village of Tanana.

Military Activities

Establishment of an Alaskan Air Base, 1928-1941

The first aircraft to fly in Alaska flew in the Fairbanks' Fourth of July celebration in 1913. Beginning in 1920, Fairbanks was the location of a number of aviation firsts. A number of long distance experimental flights carried out by the U.S. Army Air Corps, the aviation branch of the U.S. Army, used Fairbanks as a refueling stop during the 1920s. In 1924, Eielson began airmail service between Fairbanks and McGrath and the same year Wien made the first commercial flight from Anchorage to Fairbanks. By 1928, commercial aviation companies were flying to as many as 30 destinations in Interior Alaska. It was Fairbanks' status as an aviation hub that compelled Lt. Col. Henry "Hap" Arnold to recommend it as the site for an airbase in 1934.

Citing Alaska's strategic location and the need for a cold weather airfield, Alaska's non-voting Delegate to Congress Anthony J. Dimond introduced a bill in 1934 calling for construction of an Alaskan airfield. In January 1935, Congressman Wilcox of Florida introduced a bill calling for the establishment of six airfields, one in Alaska. At Congressional hearings on the bill, General Mitchell reemphasized the value of Alaska's strategic location, stating that, "Alaska is the most central place in the world for aircraft, and that is true of Europe, Asia, or North America." President Franklin D. Roosevelt signed the Wilcox National Air Defense Act on August 12, 1935. On March 31, 1937 Roosevelt signed Executive Order 7596, officially withdrawing 960 acres near Fairbanks for an airfield.

In 1939, Congress appropriated four million dollars for construction of the airfield. In August 1939 work began. Local laborers worked throughout the winter clearing land for the runway and buildings. When the Army Corps of Engineers took over construction from the Quartermaster Corps in January 1941, the project was eighty percent complete. While visiting Ladd Field, General Henry Arnold activated the Cold Weather Station in September 1940.

Cold Weather Testing
Two B-17s, two YP-37s, and Major Gaffney's O-38F were assigned to the base the first winter. In October 1940, Arnold observed that in sub-zero temperatures "metal bomb sights, machine guns, and plane controls need special adjustments." The first winter's testing proved this. Starting engines proved to be a formidable task, instruments failed with regularity, and hydraulic systems presented major problems. The electric hydraulic motor that raised and lowered landing gear was burdened so much by cold congealed hydraulic fluid that a hand pump had to be used. Fuel pumps failed, oil filter casings split, and seals broke. Controls became stiff at extremely low temperatures and, in a few cases, failed.

Discussions with Russian pilots, in preparation for delivery of Lend-Lease aircraft, made it clear that fighter aircraft operating at the Eastern Front would have to be capable of operating at temperatures as low as -65°F. There was not an aircraft in the U.S. Army Air Corps' inventory or under development that could operate well under -25°F. Communicating the demands of cold weather on aircraft and equipment to military superiors and civilian engineers in the United States was difficult. In order to improve understanding and streamline operations they were assigned to Ladd Field. Military superiors from Wright Field in Dayton, Ohio were assigned to Ladd field and civilian engineers from various aircraft and engine manufacturers from around the country were moved to Ladd Field. This allowed them to experience the effects of cold weather on themselves and aircraft first hand and more efficiently address problems as they arose. By 1944 there were 558 people assigned to the Cold Weather Test Detachment, including 43 factory representatives.

World War II, 1941-45
U.S. entry into World War II significantly impacted Ladd Field. After the Japanese attack on Pearl Harbor on December 7, 1941, Ladd Field was placed on alert status and civilians on the post were evacuated. Japan's invasion of the Aleutians in June 1942 had the most impact on Ladd Field in terms of its growth. Activities of the Sixth Air Depot Group, the Cold Weather Test Station, and later in 1942, the Air Transport Command resulted in a major expansion of facilities at Ladd Field. This buildup continued almost non-stop throughout 1945. Expansions included an extension to the existing runway and construction of a new one, eight hangers, thirty-seven 50,000 gallon fuel storage tanks, a half million square yards of parking apron, 12,000 feet of taxiway, and additional housing.

Air Depot
For aircraft involved in the war effort, the availability of and distance from strategic supplies was a critical problem in Alaska. A limited number of facilities, small capacity, and re-supply problems resulted in major logistics problems. To help alleviate this, the Sixth Air Depot Group, consisting of 25 officers and 567 enlisted men, and eight attached units consisting of eight officers and 283 enlisted men was assigned to Ladd Field in July 1942. Its mission was to supply and repair aircraft engaged in the Aleutian campaign.

Alaska-Siberia Lend-Lease Program (ALSIB)
Ladd Field's mission as the North American terminus of the ALSIB route was its most important contribution to World War II. From 1942 to 1945 Soviet pilots received training at Ladd Field in U.S. aircraft before flying them across Siberia to the Eastern Front. To facilitate delivery of Lend-Lease aircraft a unit of the Air Transport Command was sent to Ladd Field. The first planes, consisting of five A-20s, arrived at Ladd Field on September 3, 1942, followed by 22 P-40s on September 11. The first Russian pilots arrived on September 24 to begin five days of training. On October 9, Lt. Col. Nedosekin, of the Soviet Air Force, led the first twelve A-20s to

be flown by Soviet pilots from Ladd Field. Almost 8,000 aircraft were delivered over this route from 1942 to 1945.

The original authorization called for facilities for about a thousand men. This more than tripled during World War II. Through construction and land appropriations the base began to look much as it does today. Over 19,000 acres were added to the cantonment between 1940 and 1943. In addition 655,000 acres were withdrawn during this time for the Tanana Flats Training Area.

Cold War, 1946-1989

Relations between the United States and the Soviet Union deteriorated rapidly after World War II. In response the War Department established the Strategic Air Command (SAC), with headquarters in Washington, D.C. In 1946, SAC organized its first air unit at Ladd Field to begin developing a system of Polar navigation. Electronic intelligence (ELINT) B-29s, a prototype of the RB-29, began flying electronic reconnaissance missions out of Ladd AFB in 1947. The object of these missions was to map Soviet radar capabilities and develop appropriate countermeasures. Throughout the late 1940s and 1950s various SAC missions were carried out from Ladd AFB.

After the formation of the U.S. Air Force in 1947 Ladd Field was designated an Air Force Base. Although an Air Force Base, the Army's mission at Ladd continued. It included antiaircraft and ground defense, cold weather training, and emergency preparedness for nuclear attack. Antiaircraft artillery (AAA) batteries were installed around Fairbanks in the early 1950s to support Ladd's defense mission. These were replaced by the Nike missile system in 1959. To support Ladd's Air Force and Army missions a major construction program was initiated in the 1950s. Bassett Army Hospital, housing on South Post, new barracks, and a new communications center were part of this buildup.

In 1961 the U.S. Air Force moved its operations to Eielson AFB, 26 miles southeast of Fairbanks, and transferred Ladd AFB to the Army. Ladd AFB was renamed Fort Wainwright. This allowed the Army to expand its cold weather testing and training program in Alaska. The Army established the Cold Regions Research and Engineering Laboratory (CRREL) that year. During the war in Vietnam, improvements at Forts Wainwright focused primarily on equipment modernization, rather than new construction. Arctic training again was emphasized in the 1970s with exercises conducted annually. In 1986 the 6th Infantry Division (Light) was activated at Fort Wainwright. The primary mission of the 6th Infantry Division (Light) was to function as a rapid deployment force, ready to deploy worldwide on short notice. A major construction program was initiated to build support facilities for the 6th Infantry Division (Light). A new Post Exchange, gymnasium, medical center, and battalion headquarters were part of this program.

Table 1 Archaeological Surveys of Fort Wainwright Main Post

YEAR	RESEARCHER	SERVEY LOCATION	RESULTS
1979	Dixon, et. Al	South slope of Birch Hill	Prehistoric sites found
1982	Steele	Range Control Headquarters Building	No archaeological sites found
1983	Steele	Borrow Areas	No archaeological sites found
1983	Reynolds	Borrow Areas	No archaeological sites found
2001	Sackett	Biatholon Range, Birch Hill	No archaeological sites found

Table 2 Archaeological Inventory of Fort Wainwright Main Post

AHRS #	RESOURCE TYPE	CULTURAL AFILIATION	NATIONAL REGISTER STATUS
FAI-00040	Site	Unknown	Not Evaluated
FAI-00041	Site	Unknown	Not Evaluated
FAI-00042	Site	Unknown	Not Evaluated
FAI-00043	Site	Denali	Not Eligible
FAI-00199	Site	Unknown	Not Evaluated
FAI-00200	Site	Unknown	Not Evaluated

Table 3 Ladd Field National Historic Landmark Inventory

AHRS #	BLDG #	NAME
FAI-00448	1021	NURSES QUARTERS
FAI-00449	1024	RADIO STATION
FAO-00451	1043	NORTH POST CHAPEL
FAI-00452	1045	MURPHY HALL
FAI-00502	1046	GARAGE
FAI-00453	1047	7 APARTMENTS-OFFICERS
FAI-00446	1048	COMMANDER'S QUARTERS
FAI-00454	1049	12 APARTMENTS-NCO
FAI-00456	1051	14 APARTMENTS-NCO
FAI-00463	1533	BUTLER BUILDING
FAI-00464	1534	BUTLER BUILDING
FAI-00465	1537	BUTLER BUILDING
FAI-00533	1538	BUTLER BUILDING
FAI-00510	1539	BUTLER BUILDING
FAI-00466	1540	BUTLER BUILDING
FAI-00467	1555	HOSPITAL/BARRACKS
FAI-00468	1556	JITNEY GARAGE
FAI-00469	1557	HANGAR NO 1
FAI-00470	1558	AIRFIELD OPERATIONS
FAI-00472	1562	QUARTERMASTERS
FAI-00478	2085	HANGAR NO 6
FAI-00482	3005	HANGAR NO 3
FAI-00483	3006	BUTLER BUILDING
FAI-00485	3008	HANGAR NO 2
FAI-00487	3018	BUTLER BUILDING
FAI-00488	3019	BUTLER BUILDING
FAI-00489	3020	BUTLER BUILDING
FAI-00490	3021	BUTLER BUILDING
FAI-00491	3022	BUTLER BUILDING
FAI-00492	3028	BUTLER BUILDING
FAI-00465	3203	TYPE 49 AMMO IGLOO

FAI-01246	N/A	NORTH APRON/TAXIWAY
FAI-01244	N/A	NORTH RUNWAY
FAI-01245	N/A	SOUTH RUNWAY
N/A	N/A	SOUTH APRON/TAXIWAY

Table 4 Ladd Air Force Base Historic District Inventory

AHRS #	BLDG #	NAME
FAI-01248	1001	BARRACKS
FAI-01249	1004	BARRACKS
FAI-00448	1021	PERSONNEL SERVICES
FAI-00449	1024	OPS MANAGEMENT TRAINING
FAI-01251	1040	BOQ 5
FAI-01252	1041	BOQ 4
FAI-01253	1042	BOQ 3
FAI-00451	1043	PROTESTANT CHAPEL
FAI-00452	1045	VIP HOUSING
FAI-00453	1047	OFFICERS QUARTERS
FAI-00446	1048	COMMANDER'S QUARTERS
FAI-000454	1049	NCO QUARTERS
FAI-00456	1051	NCO QUARTERS
FAI-01254	1053	ELECTRIC SHOP
FAI-01255	1054	MOTOR POOL 2
FAI-00457	1059	MOTOR POOL
FAI-01257	1060	AIR DEFENSE COMMAND CENTER
FAI-00533	1538	SPECIAL INVESTIGATION TRANSPORTATION
FAI-00503	1541	AIRWAYS & AIR COMM SERVICES
FAI-00467	1555	HEADQUARTERS
FAI-00468	1556	RECIPROCAL ENGINE SHOP
FAI-00469	1557	HANGAR 1
FAI-00472	1562	AIR FORCE SERVICE STORES NO. 4
FAI-01258	1565	REFUELING MAINTENANCE SHOP
FAI-01289	1579	BOM WAREHOUSE DEPT NO 1
FAI-01338	1595	MACHINE SHOP
FAI-00504	2077	HANGAR NO 7&8
FAI-01259	2079	FLIGHT COMMUNICATIONS SECTION
FAI-00478	2085	HANGAR NO 6
FAI-01260	2104	FALCON MISSILE SECTION
FAI-00505	2106	HANGAR NO 4&5
FAI-01261	2107	FLIGHT SYNTHETIC TRAINER
FAI-01230	2201	ORDNANCE STORAGE
FAI-01231	2202	ORDNANCE STORAGE
FAI-01232	2203	ORDNANCE STORAGE
FAI-01233	2204	ORDNANCE STORAGE
FAI-01234	2205	ORDNANCE STORAGE
FAI-01235	2206	ORDNANCE STORAGE
FAI-01236	2207	ORDNANCE STORAGE
FAI-00482	3005	HANGAR NO 3
FAI-00483	3006	MAINTENANCE TRANSPORTATION
FAI-00485	3008	HANGAR NO 2

FAI-00487	3018	WAREHOUSE NO 4
FAI-00488	3019	AIR FORCE SERVICE STORES NO 2
FAI-00489	3020	AIR FORCE SERVICE STORES NO 3
FAI-00490	3021	WAREHOUSE NO 7
FAI-00491	3022	WAREHOUSE NO 8
FAI-01279	3595	POWER AND HEATING PLANT
FAI-01263	3700	GOLDEN NORTH SERVICE CLUB, U.S. ARMY
FAI-01264	3701	BX BRANCH NO 3
FAI-01265	3706	BARRACKS
FAI-01266	3707	HQ SQ SECTION
FAI-01267	3708	BARRACKS
FAI-01268	3711	BARRACKS
FAI-01269	3712	HQ SQ SECTION
FAI-01270	3713	BARRACKS
FAI-01271	3716	BARRACKS
FAI-01272	3717	DINING HALL NO 3
FAI-01273	3718	BARRACKS
FAI-01274	3719	BARRACKS
FAI-01275	3720	BARRACKS
FAI-01276	3721	BARRACKS
FAI-01277	3722	CLOTHING STORE
FAI-01278	3723	BARRACKS
FAI-01244	N/A	NORTH RUNWAY
FAI-01245	N/A	SOUTH RUNWAY
FAI-01246	N/A	NORTH TAXIWAY
N/A	N/A	SOUTH TAXIWAY/APRON

APPENDIX D

TIMBER POLICY

Policy on Use of Timber at Fort Wainwright

Army Regulation 200-3, *Natural Resources - Land, Forest, and Wildlife Management* (28 February 1995) Chapter 5 Forest Management, Section 5-2 Timber Management, b. Harvesting actions, (2) Disposal action, (d) states,

"Commercial forest products will not be given away, abandoned, carelessly destroyed, used to offset costs of contracts, or traded for products, supplies, or services. All forest products are to be accounted for and commercial harvests completed prior to the start of any construction that may impact forest resources. When forest products are removed from Army lands by any means other than a commercial timber sale, a dollar amount equal to the fair market value is to be deposited to Budget Clearing Account 21F3875.3960 20-C S99999 for products removed."

USARAK policy on forest products use, as stated in the DRAFT Fort Wainwright Forest Management Plan, is as follows:

- All forest harvesting actions must be coordinated with the Environmental Resources Department / Installation Forester prior to action.
- Public use of forest products require a permit from the Environmental Resources Department / Installation Forester prior to removal of timber from the Installation.
- Mechanical clearing techniques must be coordinated with the Environmental Resources Department / Installation Forester prior to action.
- Hand clearing techniques should be used to preclude erosion or when conducting harvesting activities in wetlands, when possible.
- Timber harvest activity is not allowed within 50 feet immediately adjacent to an anadromous stream or high value resident fish water body. Within the next 50 feet, a 50% minimum retention of trees must occur.
- Permits are required for the vehicular crossing of anadromous and resident fish streams.
- Trees with a diameter-breast-height (dbh) of less than four inches may be cut without prior approval.
- Trees with a dbh of less than four inches; slash; and other debris may be distributed into adjacent upland areas, piled for burning, hauled away, or chipped and distributed into adjacent upland areas. Specific disposal methods will be determined by the Environmental Resources Department / Installation Forester prior to action.
- If spruce logs are not immediately removed from the site, the following special precaution must be taken. All spruce logs greater than four inch dbh must be scored the length of the log with a chainsaw to a half-inch depth so as to cause drying of the phloem to prevent bark and ips beetle infestations in nearby healthy trees.

- Trees with a dbh of more than four inches should be salvaged for public use up to a four inch top.
- Trees with a dbh of more than four inches should be stacked separately from smaller diameter trees.
- All stumps should be cut within six inches or less of the ground surface.
- Spruce boughs are only to be collected from trees sized less than four inches dbh for troop training.
- All large-scale harvest activities must be coordinated with the Natural Resources Office / Installation Forester to ensure other miscellaneous harvest requirements are met prior to action.

Changes in policy may occur prior to October 1, 2001 pending final approval of the Fort Wainwright Forest Management Plan. If changes occur, an updated version with noted changes will be distributed.